

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A process ~~Process~~ for the production of cross-linked polyvinyl acetals, wherein ~~in which~~ a polymer (A1) is cross-linked, and polymer (A1) contains ~~which~~, relative to its total weight, ~~contains~~

- a) 1.0 to 99.9% by weight of structural units of formula (1)



in which R¹ means hydrogen or methyl,

- b) 0 to 99.0% by weight of structural units of formula (2)



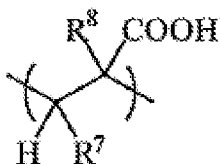
in which R² represents hydrogen or an alkyl ~~radical~~ with 1 to 6 carbon atoms,

- c) 0 to 70.0% by weight of structural units of formula (3)



in which R^3 , R^4 , R^5 and R^6 , in each case independently of one another, are each radicals with a molecular weight in the range of 1 to 500 g/mol,

- d) 0.00001 to 30.0% by weight of structural units of formula (4)



(4)

in which R^7 and R^8 , in each case independently of one another, are contain hydrogen, [[a]] carboxyl ~~group~~, ~~an~~ alkyl group with 1 to 10 carbon atoms [[,]] which is optionally substituted by ~~can exhibit~~ one or more COOH groups as ~~substituents~~, or ~~represents~~ an optionally substituted aryl group with 6 to 12 carbon atoms,

said process comprising ~~characterized in that~~ in any sequence:

- (i) reacting polymer ~~Polymer (A1) is reacted~~ with at least one polyaldehyde of formula (5),



in which R^9 represents a bond or a radical having ~~that has~~ 1 to 40 carbon atoms, and n is an integer that is greater than or equal to 2,

and

- (ii) partially esterifying groups ~~Groups~~ of formula (1) and formula (4) ~~are at least~~ partially esterified with one another.

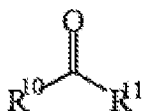
2. (Currently Amended): A process ~~Process~~ according to claim 1, wherein n is a

~~compound (5) with n = 2 or 3 is used.~~

3. (Currently Amended): A process ~~Process~~ according to claim 1, wherein a ~~compound (5) is used, in which~~ R⁹ is an aliphatic, cycloaliphatic and/or aromatic group with 1 to 12 carbon atoms.

4. (Currently Amended): A process ~~Process~~ according to claim 1, wherein glutaric dialdehyde and/or n-nonanedial is used as compound of formula (5).

5. (Currently Amended): A process ~~Process~~ according to claim 1, further comprising, wherein at any time during the process, adding at least one compound of formula (6) ~~is added,~~



(6)

in which R¹⁰ and R¹¹, in each case independently of one another, are hydrogen, ~~an alkyl group~~ with 1 to 10 carbon atoms, or an optionally substituted aryl group with 6 to 12 carbon atoms.

6. (Currently Amended): A process ~~Process~~ according to claim 5, wherein said n-butylaldehyde is used as compound of formula (6) is n-butylaldehyde.

7. (Currently Amended): A process ~~Process~~ according to claim 5, wherein the

compounds of formulas 5 and 6 are used in the following ratio:

(1) 95.00 to 99.99 parts by weight of at least one compound of formula (6)

(2) 0.01 to 5.00 parts by weight of at least one polyaldehyde of formula (5)

~~are used, whereby the indicated parts by weight are supplemented up to 100.00 parts by weight.~~

8. (Currently Amended): A process ~~Process~~ according to claim 1, wherein the esterification of (ii), optionally in the presence of at least one softener, is performed at a temperature ~~mass temperatures~~ in the range of 80 to 280°C.

9. (Currently Amended): A process ~~Process~~ according to claim 8, wherein ~~the~~ cross-linking is performed in an extruder, a kneading aggregate or another heatable aggregate.

10. (Currently Amended): A cross-linked ~~Cross-linked~~ polyvinyl acetal that can be obtained by a process according to claim 1.

11. (Currently Amended): A cross-linked polyvinyl ~~Polyvinyl~~ acetal according to claim 10, wherein said cross-linked polyvinyl ~~has a~~ ~~its~~ total content of esterified and non-esterified carboxyl groups of ~~is~~ less than or equal to 10.0% by weight, relative to the total weight of the polyvinyl acetal.

12. (Currently Amended): A cross-linked polyvinyl ~~Polyvinyl~~ acetal according to claim 10, wherein said cross-linked polyvinyl acetal ~~it~~ contains a softener.

13. (Currently Amended): A molding ~~Molding~~ compound comprising ~~that contains~~ a polyvinyl acetal according to claim 10.

14. (Currently Amended): A film comprising ~~Film that contains~~ a polyvinyl acetal according to claim 10.

15. (Currently Amended): In a laminated safety glass article, the improvement wherein said article comprises ~~Use of a film according to claim 14 for the production of laminated safety glasses.~~

16. (Currently Amended): In a coating composition, the improvement wherein said coating composition comprises ~~Coating that contains~~ a polyvinyl acetal according to claim 10.

17. (Currently Amended): In an electronic system having at least one ion-conductive intermediate layer, the improvement wherein ~~Use of a polyvinyl acetal according to claim 10 is used as an for the production of ion-conductive intermediate~~ layer ~~layers for electrochromic systems.~~